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SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO 11 FATHOMS)

NOAA nautical charts are constructed to exacting standards and are designed to promote safe navigation. Since our waterways are subject to continual change, the National Ocean Service encourages chart users to submit corrections or comments for the improvement of this product to the Director, Charting and Geodetic Services (N/CG2), National Ocean Service, NOAA, Rockville, Maryland 20852. By working together, we can make our activities safer and more enjoyable.

Thomas J. Kuglemire
Assistant Administrator for Ocean Services
and Coastal Zone Management

CAUTION
CHANGES IN BUOYAGE
Mariners are advised that authorized aids to navigation are being changed to conform to maritime standards of the International Association of Lighthouse Authorities' Maritime Buoyage System, Region B. Significant changes are: black and white vertically striped buoys to red and white vertically striped buoys; red buoys to red nuns; green buoys to green cans; and cardinal lights from white to red or green as required. Changes to aids to navigation will be announced in the Defense Mapping Agency Hydrographic/Topographic Center weekly Notice to Mariners and the U.S. Coast Guard Local Notice to Mariners.

NOAA

NATIONAL OCEAN SERVICE

UNITED STATES - WEST COAST

WASHINGTON

PUGET SOUND

SHILSHOLE BAY TO COMMENCEMENT BAY

CAUTION
Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION
Mariners are warned to stay clear of the protective riprap surrounding navigational light structures shown thus.

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Wash., or at the Office of the District Engineer, Corps of Engineers in Seattle, Wash. Refer to charted regulation section numbers.

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOTE D
CAUTION
Numerous unlighted sunken logs and stub piling are known to exist in this area.

The tidal current arrows shown on this chart represent the average maximum speeds of flood and ebb currents, and the direction of flow. The speeds are expressed in the numbers shown, and the directions by the orientation of the arrow arrow. The maximum speeds will vary through time. For exact predictions, consult the Tidal Current Tables, Pacific Coast of North America.

Mercator Projection
Scale 1:40,000 at Lat. 47°28'N

North American Datum of 1983
(World Geodetic System of 1984)

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO ELEVEN FATHOMS
AT MEAN LOWER LOW WATER

HEIGHTS
Elevations of rocks, bridges, landmarks and lights are in feet and refer to Mean High Water. Contour and summit elevation values are in feet and refer to Mean See Level.

AUTHORITIES
Hydrography and topography by the National Ocean Service, Charting and Geodetic Services with additional data from the Corps of Engineers, the Geological Survey, the U.S. Coast Guard, and the Defense Mapping Agency.

HYDROGRAPHY
The most recent bathy hydrographic surveys used in the compilation of this chart, were accomplished by the NOAA ship EXPLORER and HODGSON, commanded by LT. W. F. Forester and CDR. F. B. T. Sarne.

For Symbols and Abbreviations, see Chart No. 1.

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 7 for important supplemental information.

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION
Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station locations are shown thus:
(Accuracy inaccurate) (Approximate location)

NOAA VHF-FM WEATHER BROADCASTS
The National Weather Service station listed below provides continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.
Seattle, Wash. KHB-60 162.55 MHz

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on those aids has been omitted from this chart.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

TIDAL INFORMATION

Place	Lat./Long.	Height referred to datum of soundings (MLLW)			
		Mean higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
		feet	feet	feet	feet
Bremerton, Port Orchard	(47°34'N/122°37'W)	11.7	10.6	2.8	-4.5
Seattle, Elliott Bay	(47°36'N/122°20'W)	11.4	10.3	2.8	-4.5
Port Blakely	(47°38'N/122°30'W)	11.5	10.6	2.8	-4.5
Bremerton	(47°33'N/122°38'W)	11.7	10.6	2.8	-4.7
Tacoma, Commencement Bay	(47°16'N/122°25'W)	11.9	10.8	2.8	-4.7
Olympia	(47°20'N/122°26'W)	11.8	10.8	2.8	-4.6
(1984)		11.8	11.0	2.8	-4.6

COLREGS, 81 1136 (see note A)
International Regulations for Preventing Collisions at Sea, 1972.
The entire area on this chart lists seaward of the COLREGS Demarcation Line.

NOTE C
Mariners are cautioned that the Washington State Ferries may deviate from the published sailing routes due to inclement weather, traffic conditions, navigational hazards or other emergency conditions.

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83).

RACING BUOYS
Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other privately maintained buoys are not all listed in the U.S. Coast Guard Light List.

SHILSHOLE BAY
MURDEN COVE
BAINBRIDGE ISLAND
PUGET SOUND
EAGLE HARBOR
BLAKELY HBR
PORT ORCHARD
RICH PASSAGE
DYES INLET
BREMERTON
PORT ORCHARD INLET
SINCLAIR INLET
YUKON HARBOR
BLAKE ISLAND
SEATTLE
QUEEN ANNE HILL
MAGNOLIA BLUFF
INTERBAY
FREMONT
LAKE UNION
ELLIOTT BAY
SOUTH SEATTLE
WEST SEATTLE
GEORGETOWN
HARBOR ISLAND
DUWAMISH WATERWAY
COLVOS PASSAGE
VASHON
TRAMP HARBOR
SOUTHBOUND PUGET SOUND TRAFFIC LANE
NORTHBOUND PUGET SOUND TRAFFIC LANE
SEPARATION ZONE
EAST PASSAGE

UNITED STATES - WEST COAST

WASHINGTON

PUGET SOUND

SHILSHOLE BAY TO COMMENCEMENT BAY

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Mariners are warned to stay clear of the protective riprap surrounding navigational light structures shown thus:

NOTE A

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WARNING

The pilotage depths are not any safety on any ranges and no navigation, particularly in the entrances, Refer to U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOTE D

CAUTION

Numerous underwater logs and stub piling are known to exist in this area.

Mercator Projection
Scale 1:40,000 at Lat. 47°28'N

North American Datum of 1983 (World Geodetic System of 1984)

SOUNDINGS IN FATHOMS
FATHOMS AND FEET TO ELEVEN FATHOMS AT MEAN LOWER LOW WATER

HEIGHTS

Elevations of rocks, bridges, landmarks and lights are in feet and refer to Mean High Water. Contour and summit elevation values are in feet and refer to Mean Sea Level.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Charts and Geodetic Services with additional data from The Corps of Engineers, the Geological Survey, The U.S. Coast Guard and the Defense Mapping Agency.

HYDROGRAPHY

The most recent basic hydrographic surveys used in the compilation of this chart were accomplished by the NOAA Ship EXPLORER and HOOD/SON, commanded by LT. W. F. Forester and CDR F. B. T. Sierra.

For Symbols and Abbreviations, see Chart No. 1

SUPPLEMENTAL INFORMATION

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AIDS TO NAVIGATION

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CAUTION

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Station positions are shown thus:
⊙(Accurate location) ○(Approximate location)

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POLLUTION REPORTS

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CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

TIDAL INFORMATION

Place	Lat.	Long.	Mean Higher High Water (feet)	Mean High Water (feet)	Mean Low Water (feet)	Extreme Low Water (feet)
Duwamish, Port Orchard	47° 35' N	122° 37' W	11.7	10.8	2.6	4.5
Seattle, Elliott Bay	47° 36' N	122° 20' W	11.4	10.5	2.6	4.5
West Waterway	47° 36' N	122° 20' W	11.5	10.6	2.6	4.5
Shilshole, Commencement Bay	47° 33' N	122° 35' W	11.7	10.8	2.6	4.7
Tacoma, Commencement Bay	47° 17' N	122° 25' W	11.6	10.5	2.6	4.5
Gig Harbor	47° 20' N	122° 35' W	11.6	11.0	2.6	4.5

COLREGS, 81-1, 1972 (see note A)

International Regulations for Preventing Collisions at Sea, 1972.

The yellow areas on this chart have been approved by the COLREGS Demarcation Line.

NOTE C

Mariners are cautioned that the Washington State Ferries may deviate from the published standard routes due to inclement weather, traffic conditions, navigational hazards or other emergency conditions.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) and for charting purposes is considered adjacent to World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.649" southward and 4.461" westward to agree with this chart.

RACING BUOYS

Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other privately maintained buoys are not all listed in the U.S. Coast Guard Light List.

SCALE 1:40,000
Nautical Miles
Yards
Meters

LOGARITHMIC SPEED SCALE

To find SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.6 miles run in 18 minutes, the speed is 15.3 knots.

CAUTION

This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic/Topographic Center and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district in the area shown in the lower left hand corner.

This nautical chart was produced with the aid of the National Ocean Service's computer-assisted cartographic compilation system.

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

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18474

CONTINUED ON CHART 18448

Shilshole Bay to Commencement Bay 18474
SOUNDINGS IN FATHOMS - SCALE 1:40,000

SOUNDINGS IN FATHOMS
FATHOMS AND FEET TO 11 FATHOMS

FATHOMS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
FEET 6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96 102
METERS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33

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